

A RESOURCE ENGINEERING COMPANY

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ERT Reference No.: RAS:7057 ERT Document No.: EF-3315 environmental and engineering excellence

August 3, 1987

Mr. David Govey
FMC Corporation
Phosphorus Chemicals Division
Box 547
Mitro, West Virginia 2-5145

Subject: Proposal to conduct an ambient air and water sampling and analysis program for the Mitro, West Virginia landfill site (IP-331J).

Dear Mr. Covey:

ERT, a Resource Engineering Company, is pleased to submit this technical proposal and associated cost estimate for the air and water sampling program outlined in your letter of 23 July, 1987 to %r. Joseph Current of ERT. Samples will be collected at the closed landfill site and analyzed for phonol and disathyl phenol.

ERT is uniquely qualified to provide the air and water quality monitoring services necessary for this program. Our engineers and chemists are familiar with the Esmawha Valley, having conducted fugitive emission studies for two other chemical manufacturers in the Valley. ERT staff have worked with both the West Virginia Air Follution Control Commission and the National Institute for Chemical Studies in Charleston, West Virginia to disgnose and solve air toxics problems. ERT maintains full in-house laboratory capabilities with staff skilled at trace-level analyses for pollutants.

The proposed technical approach for this program is presented in Attachment A. The sampling and enalysis program designed for PMC will determine whether phanol and dimethyl phanol are being released into the water or air at significant levels at the closed municipal landfill site. MRT will follow approved EPA methodology for water and sludge analyses for these target compounds; air samples will be collected and analyzed under protocols which are based upon EPA methods and which have been validated by the ERT laboratory for a comprehensive air toxics measurement program currently in progress at a Superfund site.

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ERT is prepared to provide its services to THC for the sampling and analysis program on a time and materials basis in accordance with ERT's Standard Commercial Terms. Actual costs will depend on the results of the three separate site visits, as the number of "seeps" found on each occasion will directly impact the sampling and analytical requirements of the program. For an evaluation scenario as suggested in the TMC Scope of Work for the Nitro Landfill Sampling, if each visit finds one "seep" and two water sample locations, the total cost of the program is setimated to be \$15,950.00. Details for the cost estimate are provided in Attachment B.

ERT will prepare a final report to present the results of the three site visits and the data from all analyses. This report will include a parrative of the landfill idspections and a map detailing sampling sites. Sampling and analytical methods will be discussed, and the quality assurance/quality control measures implemented will be provided.

ERT is proposed to initiate sampling one week after authorization by PMC to begin this program. Sampling will be performed on three separate occasions during August and September, on dates to be determined upon acceptance of this proposal by PMC. ERT does not enticipate difficulty in scheduling mutually convenient dates for this program. A written report will be provided by EET to PMC within thrity (30) days of completion of the third site visit.

We thank FMC for the opportunity to subsit this proposal, and look forward to providing these services. If you have any questions or comments regarding this proposal, please contact me at (617) 369-8910 Extension 508.

Sincerely yours,

Mark Greenberg

Senior Air Quality Scientist/Project Manager

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Enclosures

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Attachment A

Technical Approach

As requested in the FMC outline for eite work, an ERT staff member will visit the Mitro landfill on three separate occasions. On each occasion, the site will be inspected for black, terry residue ("seep"). The samples collected will depend upon the number of "seeps" detected and the presence or absence of surface runoff streams, but a minimum (no "seeps" found) sampling recommended for each site visit will include:

- one upwind air sample collected for background monitoring
- one air sample taken downwind at the fance never an occupied dwelling
- one field blank for the eir sampling method
- water samples taken from surface runoff streams and the score sewer flowing into the adjacent river

Each "seep" detected will generate the following additional sampling:

- one cample of the black terry residue
- one air sample collected shows the "seap"
- one air sample collected at the fence nearest the "samp"

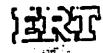
If more than one surface runoff stream is present, samples of each will be collected.

Air samples will be collected following a modification to Mathod TO-1 of the Compendium of Mathods for the Determiniation of Toxic Organic Compounds in Ambient Air, EPA-600/4-84-041, April 1984. A sampling train will be used that includes a probe, an ice both impinger and a IAD sorbent cartridge connected to a metered pump. The XAD sorbent tube allows collection of semivolatile organic emissions from embient air; both phenol and dimathylphenol can be monitored by this method. Sampl volume will be adjusted to provide the detection limits requested of 100 ppb for these compounds in air.

Samples Will be identified with tags or labels that include all relevant information required to maintain accurate records. Upon completion of each site visit, samples will be recorded in field logbooks in accordance with standard ERT quality assurance procedures, and properly packaged for shipment to the ERT laboratory in Wilmington, MA. At the time of receipt by laboratory personnel, all samples are assigned unique control numbers. Chain of custody records will accompany the emples at all times and will document all transfers from the field collection through the analyses stages of the program.

Water samples will be extracted and analyzed by gas chromatography/mass spectrometry (GC/MS) for phenol and disethyl phenol in accordance with EFA Mathod 625 40 CFR 69. Appendix A. The black tarry residue will be ensigned by EFA Mathod 8070 of SV-846. The IAD sorbent cartridges and The impinger waters will also be analyzed by GC/MS for the two phenols following ERT modified versions of EFA sanctioned protocols. All analyses will include appropriate quality control measures; as required in the referenced EFA methods.

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Attachment B

Time and Materials Cost Estimate

ERT is propared to provide its services to FMC for the sampling and analysis program on a Time and Materials basis in accordance with ERT's Standard Commercial Terms (Attachment C). Field sampling costs are estimated on the assumption that each site visit will require one day to complete. Should greater than two "seepe" be detected on any one Visit, additional time would likely be required for the six sampling, and costs would be adjusted accordingly.

Analytical requirements and attendant costs will depend directly on the results of the site survey. Detailed costs are provided for the cases of sere or one "seep" detections with two water samples. Additional samples would be analyzed on a fixed price per sample basis.

	. per	visit	program
Site Visit Equipment preparation, travel Field survey, sampling	\$2,	100.00	\$6,300.00
Sample Analyses			
Case 1 - zero "meeps", two waters Air samples (3) - field blank, upwind, near fence Water samples (2)	1,0	000.00 400.00 400.00	<u> </u>
Case 2 - one "seep", two waters Air samples (4) - field blank, upwind, above "seep", fend near "seep" Seep material Water samples (2)	1,	300.00 350.00 400.00 050.00	
Additional Sample Analyses as requi Air sample (1) Seep Material Water sample	* · · · · · · · · · · · · · · · · · · ·	275.00 350.00 200.00	
Estimated analytical costs for 3 of	tee ,		6,150.00
Report Preparation and administrati	:	ARI	3,500.00 00256
Total Estimate	d Costs		15,930.00